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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,241	04/03/2001	Mark A. Hughes	922-128	8894

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EXAMINER	
LY, ANH VU H	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/824,241	HUGHES ET AL.	
	Examiner	Art Unit	
	Anh-Vu H. Ly	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☒ Claim(s) *1-8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is in response to applicant's amendment filed December 11, 2006. Claims 1-8 are pending.

Claim Objections

2. Claims 1-8 are objected to because of the following informalities:

With respect to claim 1, in line 2, the acronym "TCP" must spell out if it is presented in the claim for a first time. In line 7, replace "such determined TCP control packets" with --said determined TCP control packet-- since only a packet being determined as recited in lines 4-5.

With respect to claim 2, in line 3, replace "the TCP header" with --TCP header--.

With respect to claim 3, in line 1, replace "in which packets" with --further comprises packets--. In line 2, replace "PSH set" with --PSH flag set--.

With respect to claim 4, in line 2, the acronym "TCP" must spell out if it is presented in the claim for a first time.

With respect to claim 6, in line 3, replace "PSH set" with --PSH flag set--.

With respect to claim 7, in line 1, the first acronym "TCP" must spell out.

With respect to claim 8, in line 2, replace "the TCP header" with --TCP header--.

Claim 5 is objected for the reasons as set forth in objected independent claim 4.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, in line 8, the limitation "such TCP control packets control" is unclear. It is unclear what being controlled by the TCP control packets.

With respect to claim 2, in line 3, the limitation "establishing if any flag other than the PSH flag bit is set" is unclear. It is unclear what being established. Further, in lines 3-4, "the PSH flag bit" lacks antecedent basis.

Claim 3 is rejected for the reasons as set forth in rejected claims 1 and 2.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Fluss (US Patent No. 6,304,578 B1).

With respect to claims 1 and 4, Fluss discloses a method for controlling an allocation of packet transmission priority to TCP packets within a switch to transmit packets thereover (Fig. 4), said method comprising:

a) determining whether a packet passing through said switch to be transmitted is a TCP control packet (col. 8, lines 11-14 and Fig. 4, block 312, packets that are smaller than some threshold may be considered likely to contain control information either to establish or terminate connections or perhaps to acknowledge receipt of packets. Herein, acknowledgment (ACK) packets are TCP control packets);

b) assigning by the switch, within the packet, a packet transmission priority to such determined TCP control packets that is different to the priority of TCP data packets that such TCP control packets control (col. 8, lines 19-21 and Fig. 4, block 322, these shorter, control packets thus are assigned the next higher priority, priority level 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-3, 5, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fluss in view of Nakamura et al (US Patent No. 6,553,031 B1). Hereinafter, referred to Fluss and Nakamura.

With respect to claims 2 and 5, Fluss discloses a method for assigning priority level to control packets (Fig. 4). Fluss does not disclose checking flag bits within TCP header and establishing if any flag other than PSH flag bit is set. Nakamura discloses that the control information extractor circuit 16 may extract the seventh byte of TCP header in which the TCP code bit regions is located. If the 19^{th} byte is found to be effective, e.g., including the code bits of TCP, the establishment or disconnecting of the connection may be determined according to the logical OR of the check result of the SYS bit and FIN bit in the TCP code bit region. Herein, at least a flag other than a PSH flag is set (col. 13, lines 27-40 and Figs. 10 and 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of checking flag bits in TCP header in Fluss's system, as suggested by Nakamura, to determine whether a packet is a control packet.

With respect to claims 3 and 6, Fluss discloses allocating an increased packet transmission priority to TCP packets having a flag bit other than PSH flag set (Fig. 4, block 312, acknowledgment packet with priority level 2, herein, only ACK bit is set).

With respect to claim 7, Fluss discloses a switch for the reception and transmission of TCP packets passing through said switch including both control packets and non-control packets each having a header conforming to TCP (Fig. 1), said switch comprising:

a multiplicity of ports for receiving and transmitting TCP packets passing through said switch (Fig. 1, header 103 having ports for receiving and transmitting TCP/IP packets);

means for allocating a packet transmission priority to TCP packets within said switch as they are being transmitted (col. 8, lines 11-14 and Fig. 4, block 312, packets that are smaller than some threshold may be considered likely to contain control information either to establish or terminate connections or perhaps to acknowledge receipt of packets. Herein, acknowledgment (ACK) packets are TCP control packets);

mean for assigning, within the packet, a packet transmission priority to said given TCP packet passing through said switch dependent on whether it is a TCP control packet (col. 8, lines 19-21 and Fig. 4, block 322, these shorter, control packets thus are assigned the next higher priority, priority level 2).

Fluss does not disclose means for checking flag bits within the header of each of said TCP packets to determine whether a given TCP packet is a TCP control packet. Nakamura discloses that the control information extractor circuit 16 may extract the seventh byte of TCP header in which the TCP code bit regions is located. If the 19th byte is found to be effective, e.g., including the code bits of TCP, the establishment or disconnecting of the connection may be determined according to the logical OR of the check result of the SYS bit and FIN bit in the TCP code bit region (col. 13, lines 27-40 and Figs. 10 and 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of

checking flag bits in TCP header in Fluss's system, as suggested by Nakamura, to determine whether a packet is a control packet.

With respect to claim 8, Fluss discloses a method for assigning priority level to control packets (Fig. 4). Fluss does not disclose checking includes logic for snooping TCP header to establish whether any flag in said header other than a PSH flag bit is set. Nakamura discloses that the control information extractor circuit 16 may extract the seventh byte of TCP header in which the TCP code bit regions is located. If the 19th byte is found to be effective, e.g., including the code bits of TCP, the establishment or disconnecting of the connection may be determined according to the logical OR of the check result of the SYS bit and FIN bit in the TCP code bit region. Herein, at least a flag other than a PSH flag is set (col. 13, lines 27-40 and Figs. 10 and 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of checking flag bits in TCP header in Fluss's system, as suggested by Nakamura, to determine whether a packet is a control packet. Fluss discloses allocating an increased packet transmission priority to TCP packets having a set flag bit other than PSH flag set (Fig. 4, block 312, acknowledgment packet with priority level 2, herein, only ACK bit is set).

Response to Arguments

6. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Geiger et al (US Patent No. 5,987,022) discloses method for transmitting multiple-protocol packetized data.

Fukushima et al (US 2002/0027924 A1) discloses router device and network system.

Elzur et al (US 2003/0005143 A1) discloses storing a frame header.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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